

SC READY Data Review Report Grade 4

On November 18, 2016 the South Carolina Department of Education convened a panel of experts to review item data on SC READY. The panel looked at items with a high percentage of students answering correctly and items with a low percentage of students answering correctly. The discussions of that panel yielded the following recommendations.

Areas where fourth grade students are doing well include the following standards:

- 4.NSBT.5
- 4.NSF.3.b
- 4.NSF.3.c
- 4.G.1

Teachers must keep up the rigor on these standards and, at the same time, work hard to improve performance on standards in which students did not perform as well.

Standards of concern:

- 4.NSF.4.c
- 4.NSF.7
- 4.ATO.3
- 4.G.4
- 4.MDA.1
- 4.MDA.2
- 4.MDA.5

The panel recognizes the hard work of SC educators and offers the following as suggestions for ways to improve student success on SC READY.

- Give problems with real-world situations. Since many of the test items have some sort of context, there are not many non-contextual math questions.
- Have students work on grade-level appropriate problems where the result of an operation is given. This may be a sum, difference, product, or quotient. Then the student must find a missing addend, subtrahend, minuend, factor, dividend, or divisor. Students should also be able to solve these types of problems in a real-world context.
- Give students an opportunity to experience a long assessment in a single sitting at least once before taking SC READY.
- Provide students with practice items that are missing the question to help with story problems. Then ask them to pose questions for a particular problem. Solve a few of their questions. Then reveal the question that went with the original problem. This allows students to think deeper about what questions can be asked in story problems.
- Have students draw pictures, especially when one is not provided. Given the perimeter and width of a quadrilateral, students were asked to find the length. Many of the students simply subtracted the two quantities.
- Be inclusive of all angle measures when working toward understanding the relationship of angle measurement to a circle. For instance, show students what a 1-degree angle looks like, and then explain to them, in a natural counting way, that 360 of them make up a circle. Along the way to 360 degrees point out other mathematically significant angles.

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- Warn students to be careful of test questions with a change in the units. In particular, give students problems where the work is done in one unit and the answer is asked for in a smaller converted unit.
- Include a list of three or more numbers to order from least to greatest when comparing decimal numbers. In the list include numbers with the same and different integer parts. In addition, include numbers that terminate at the tenths and hundredths in the same list.
- Beware of teaching signal word such as “of” always meaning multiply. Use caution in teaching absolutes for dissecting story problems.
- Include practice items with fractional amounts of larger measurements. For instance, a problem can start with a half of a kilometer, and then add to that some number of meters.
- Students should practice questions that make them find an intermediate value given the beginning value and the end value.
- Warn students to be careful when multiplying a whole number times a proper fraction. Teach students to make a visual model in order to represent the situation.
- Have students practice with non-standard geometric shapes containing multiple lines of symmetry.